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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,026	03/30/2000	Michael R. Van Buskirk	204306	7676

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ART UNIT	PAPER NUMBER
2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/539,026	VAN BUSKIRK ET AL.
	Examiner	**Art Unit**
	Hussein A El-chanti	2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 March 2000_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-54_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-54_ is/are rejected.

7)☒ Claim(s) _7_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _30 March 2000_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _4 and 5_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   This action is responsive to application filed on Mar 30, 2000. Claims 1-54 are

pending examination.

Claim Objections

2.   Claim 7 is objected to because of the following informalities: Line 13 of page 48

includes a spelling error "vidoe". Appropriate correction is required.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4)

because reference characters "802" and "804" have both been used to designate

terminal. A proposed drawing correction or corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The objection to the

drawings will not be held in abeyance.

4.   A series of singular dependent claims is permissible in which a dependent claim

refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any

claim which does not also depend from said dependent claim. It should be kept in mind

that a dependent claim may refer to any preceding independent claim. In general,

applicant's sequence will not be changed. See MPEP § 608.01(n). Claim 35 was

considered to be referring to claim 34.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-8, 10, 12-15, 18, 19, 21, 22, 24-32, 36-39, 42-46 and 48-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Ludwig et al., U.S. Patent No. 6,237,025 (referred to hereafter as Ludwig).

As to claim 1, Ludwig teaches a computer readable-medium having computer-executable instructions for communicating between an application and a multipoint processing mode having at least one audio processor module for processing audio data in a multipoint conference and at least one video processor module for processing video data in a multipoint conference, the computer-executable instructions (see col. 5 lines 20-27 and col. 4 lines 57-67) performing the step of:

exposing at least one interface by the multipoint processing module to receive a request from the application to command the multipoint processing module to modify its default operation to alter at least one attribute of at least one of the audio processor module and video processor module (see col. 10 lines 48-60).

As to claim 2, Ludwig teaches the computer-readable medium of claim 1 wherein said at least one interface comprises an audio interface, the application using said audio interface to request the multipoint processing module to change a routing of at least one audio input stream towards at least one audio output stream (see col. 10 lines 60-67 and col. 20 lines 40-47).

As to claim 3, Ludwig teaches the computer-readable medium of claim 2 wherein

the request is selected from the group consisting of:

a command to retrieve an audio crossbar topology, the audio crossbar

topology indicating how a set of audio input streams is being routed to a set of audio

output streams (see col. 14 lines 11-47);

a command to change the audio crossbar topology to indicate to the

multipoint processing module how the set of audio input streams should be routed to a

set of audio output streams (see col. 21 lines 55-63, user can add additional participants

to the conference);

a command to retrieve a value of an audio crossbar control parameter

(see col. 21 lines 55-63);

a command to set a value of an audio crossbar control parameter (see col.

16 lines 31-39);

a command to retrieve a minimum value, a maximum value, and a default

value for an audio crossbar control parameter (see col. 23 lines 7-10 and col. 25 lines

13-40, where "idle" is default value, minimum of 1 connection is required and a

maximum of four);

a command to retrieve a mixing capability and a transcoding capability of

the audio crossbar (see col. 12 lines 59-col. 13 lines 9); and

a command to retrieve an audio level of a list of audio input streams (see

col. 23 lines 37-47).

As to claim 4, Ludwig teaches the computer-readable medium of claim 1 wherein said at least one interface comprises a video interface, the application using said video interface to request the multipoint processing module to change a routing of at least one video input stream towards at least one video output stream (see col. 10 lines 60-67 and col. 20 lines 40-47).

As to claim 5, Ludwig teaches the computer-readable medium of claim 4 wherein the request is selected from the group consisting of:

a command to retrieve a video crossbar topology, the video crossbar topology indicating how a set of video input streams is being routed to a set of video output streams based on a content of associated audio input streams (see col. 14 lines 11-47);

a command to change the video crossbar topology to indicate to the multipoint processing module how the set of video input streams should be routed to a set of video input streams based on a content of associated audio input steams;

a command to retrieve a value of an audio crossbar control parameter (see col. 21 lines 55-63, user can add additional participants to the conference);

a command to retrieve a value of an video crossbar control parameter (see col. 21 lines 55-63);

a command to set a value of an video crossbar control parameter (see col. 16 lines 31-39);

a command to retrieve a minimum value, a maximum value, and a default value for an video crossbar control parameter (see col. 23 lines 7-10 and col. 25 lines

13-40, where "idle" is default value, minimum of 1 connection is required and a

maximum of four);

a command to retrieve a mixing capability and a transcoding capability of

the video crossbar (see col. 12 lines 59-col. 13 lines 9); and

a command to retrieve an audio level of a list of video input streams (see

col. 23 lines 37-47).

As to claim 6, Ludwig teaches the computer-readable medium of claim 2 wherein

said at least one interface comprises a video interface, the application using said video

interface to request the multipoint processing module to change a routing of at least one

video input stream towards at least one video output stream (see col. 10 lines 60-67

and col. 20 lines 40-47).

As to claim 7, Ludwig teaches the computer-readable medium of claim 6 wherein

the request is selected from the group consisting of:

a command to retrieve an audio crossbar topology, the audio crossbar

topology indicating how a set of audio input streams is being routed to a set of audio

output streams (see col. 10 lines 60-67 and col. 20 lines 40-47);

a command to change the audio crossbar topology to indicate to the

multipoint processing module how the set of audio input streams should be routed to a

set of audio output streams (see col. 21 lines 55-63, user can add additional participants

to the conference);

a command to retrieve a value of an audio crossbar control parameter

(see col. 16 lines 31-39);

a command to set a value of an audio crossbar control parameter (see col. 16 lines 31-39);

a command to retrieve a minimum value, a maximum value, and a default value for an audio crossbar control parameter (see col. 23 lines 7-10 and col. 25 lines 13-40, where "idle" is default value, minimum of 1 connection is required and a maximum of four);

a command to retrieve a mixing capability and a transcoding capability of the audio crossbar (see col. 12 lines 59-col. 13 lines 9); and

a command to retrieve an audio level of a list of audio input streams (see col. 23 lines 37-47).

the request to route at least one video input stream is selected from the group consisting of:

a command to retrieve a video crossbar topology, the video crossbar topology indicating how a set of video input streams is being routed to a set of video output streams based on a content of associated audio input streams (see col. 10 lines 60-67 and col. 20 lines 40-47);

a command to change the video crossbar topology to indicate to the multipoint processing module how the set of video input streams should be routed to a set of video input streams based on a content of associated audio input steams;

a command to retrieve a value of an audio crossbar control parameter (see col. 21 lines 55-63, user can add additional participants to the conference);

a command to retrieve a value of an video crossbar control parameter

(see col. 21 lines 55-63);

a command to set a value of an video crossbar control parameter (see col.

16 lines 31-39);

a command to retrieve a minimum value, a maximum value, and a default

value for an video crossbar control parameter (see col. 23 lines 7-10 and col. 25 lines

13-40, where "idle" is default value, minimum of 1 connection is required and a

maximum of four);

a command to retrieve a mixing capability and a transcoding capability of

the video crossbar (see col. 12 lines 59-col. 13 lines 9); and

a command to retrieve an audio level of a list of video input streams (see

col. 23 lines 37-47).

As to claim 8, Ludwig teaches the computer-readable medium of claim 7 wherein

said at least one interface further comprises a format control interface, the application

using said format control interface to retrieve and set an audio format and a video

format, the format control interface comprising:

a command to retrieve a preferred audio and video format for a

conference (see col. 18 lines 53-col. 19 lines20);

a command to set the preferred audio and video format for a conference

(see col. 18 lines 53-col. 19 lines20 and col. 39 lines 27-40);

a command to retrieve a format structure and configuration capability

structure pair of a conference, the format structure and configuration capability structure

pair describing an audio and video format supported by the conference (see col. 18

lines 53-col. 19 lines20);

a command to retrieve a number of audio and video format structure and

configuration capability structure pairs that are available in a conference (see col. 18

lines 53-col. 19 lines20);

a command to reorder a list of preferred audio formats (see col. 18 lines

53-col. 19 lines20); and

a command to reorder a list of preferred video formats (see col. 18 lines

53-col. 19 lines20).

As to claim 10, Ludwig teaches the computer-readable medium of claim 3

wherein the multipoint processing module disables the command to set a value of an

audio crossbar control parameter when a flag is set (see col. 16 lines 32-38, call "Hold

being the control flag).

As to claim 12, Ludwig teaches the computer-readable medium of claim 5

wherein the multipoint processing module disables the command to set a value of a

video crossbar control parameter when a control flag is set (see col. 16 lines 32-38).

As to claim 13, Ludwig teaches a method to communicate between a media

service provider and a multipoint processing module controlling an encoder module and

a decoder module for processing video data in a multipoint conference (see col. 5 lines

20-27 and col. 4 lines 57-67), the method comprising the step of:

exposing at least one interface by one of the media service provider

component and the multipoint processing module to communicate commands and

indications between the media service provider component and the multipoint

processing module (see col. 10 lines 48-60).

As to claim 14, Ludwig teaches the method of claim 13 wherein said at least one

interface further comprises a pin interface, the multipoint processing module using said

pin interface to retrieve a direction and crossbar positional index of one of the audio

streams and video streams (see col. 20 lines 40-col. 21 lines 2).

As to claim 15, Ludwig teaches the method of claim 13 wherein said at least one

interface further comprises a decoder interface to handle decoder commands, the

decoder interface comprising:

a command to complete updating a video frame and display the video

frame until commanded to release the video frame (see col. 21 lines 55-64, where the

user displays the video frame until call is put on hold or hang up); and

an indication of a video temporal and spatial trade-off of the encoder (see

col. 21 lines 55-64 and col. 28 lines 55-col. 29 lines 5 and col. 16 lines 53-62).

As to claim 18, Ludwig teaches the method of claim 13 wherein the multipoint

processing module has a video pin, said at least one interface further comprises a

bandwidth interface comprising:

a command to specify an upper limit in bandwidth transmission of the

video pin (see col. 32 lines 12-30);

a command to retrieve the video pin's upper limit in bandwidth

transmission (see col. 32 lines 12-30);

a command to retrieve values of the upper limit in bandwidth transmission

with which the video pin may be setup, the values including a minimum value, a

maximum value, a default value, and a support value (see col. 32 lines 12-30).

As to claim 19, Ludwig teaches the method of claim 13 wherein the multipoint

processing module has a video pin, said at least one interface further comprises a

frame rate control interface comprising:

a command to specify a video frame's average display time to the video

pin;

a command to retrieve the video frame's average display time;

a command to retrieve values for the video frame's average display time

with which the video pin may be setup, the values including a minimum value, a

maximum value, a default value, and a support value (see col. 18 lines 19-33).

As to claim 21, Ludwig teaches a multipoint processing accelerator apparatus for

transmitting audio and video data over a plurality of channels in a multipoint conference

being controlled by an application, the apparatus comprising:

at least one hardware module having a default operation for applying

signal processing operations to at least one of the audio and video data (see col. 5 lines

20-27 and col. 4 lines 57-67); and

a minidriver, said minidriver communicating with the application through at

least one property set to do one of receiving a command to modify the default operation

of the at least one hardware module and sending a command to the application (see

col. 10 lines 48-60).

As to claim 22, Ludwig teaches the apparatus of claim 21 wherein at least one property set comprises an audio topology property set (see col. 14 lines 11-47).

As to claim 24, Ludwig teaches the apparatus of claim 21 wherein at least one property set comprises a video topology property set (see col. 10 lines 48-60).

As to claim 25, Ludwig teaches the apparatus of claim 24 wherein the video topology property set comprises:

a property to do one of updating a video crossbar content and retrieving an video crossbar content (see col. 14 lines 11-47 and col. 14 lines 11-47);;

a property to retrieve mixing and transcoding capabilities of a video crossbar (see col. 12 lines 59-col. 13 lines 9);

a property to do one pf setting a periodicity of an interrupt service routine and getting a periodicity of an interrupt service routine (see col. 37 lines 2-65 and col. 40 lines 49-56);

a property to do one of setting a time to evaluate whether a speaker is continuing to speak and getting a time to evaluate whether a speaker is continuing to speak (see col. 32 lines 41-64 and col. 16 lines 32-38);

a setting to specify a second time during which a speaker and a video switching process can not be taken over by a second speaker (see col. 37 lines 1-17, user can refuse incoming calls); and

a setting to specify a third time, the third time being the time when a switch is made and when a fast update request is sent to the speaker's system (see col. 37

lines 44-54, user can add additional callers to conference thus adding audio and video input).

As to claim 26, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a decoder property set (see col. 10 lines 48-60).

As to claim 27, Ludwig teaches the apparatus of claim 26 wherein the decoder property comprises:

a property to specify that a video frame update be completed and a video frame be displayed until receiving a release signal (see col. 21 lines 55-64, where the user displays the video frame until call is put on hold or hang up); and

a property to indicate a video temporal and spatial trade-off of an encoder (see col. 32 lines 12-30).

As to claim 28, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a video encoder send property set (see fig. 31B and its corresponding illustration "compress/decompress").

As to claim 29, Ludwig teaches the apparatus of claim 28 wherein the at least one hardware module comprises a video encoder, the video encoder send property set comprises:

a property to signal to the application that it needs to send a command to the video encoder (see col. 21 lines 55-64, where the user can resume or hold a call, sending a command to the video encoder to resume or hold video encoding).

As to claim 30, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a stream topology property set (see col. 23 lines 37-47).

As to claim 31, Ludwig teaches the apparatus of claim 30 wherein the stream topology property set comprises:

a property to retrieve a direction and crossbar positional index of a stream (see col. 23 lines 37-47).

As to claim 32, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a video encoder property set (see fig. 31B and its corresponding illustration "compress/decompress").

As to claim 36, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a bandwidth property set (see col. 32 lines 12-30).

As to claim 37, Ludwig teaches the apparatus of claim 36 wherein the bandwidth property set comprises:

a property to do one of specifying an upper limit in bandwidth transmission to a video output pin and supplying the upper limit bandwidth transmission of the video output pin to a media service provider (see col. 32 lines 12-30).

As to claim 38, Ludwig teaches the apparatus of claim 21 wherein the at least one property set comprises a frame rate property set (see col. 18 lines 19-33).

As to claim 39, Ludwig teaches the apparatus of claim 38 wherein the frame rate property set comprises:

a property to do one of specifying a video frame's average display time to a video output pin and supplying the video frame average display time to a media service provider component (see col. 18 lines 19-33).

As to claim 42, Ludwig teaches a computer readable medium having computer-executable instructions for bridging a plurality of multicast conferences, each of the plurality of multicast conferences having at least one client, the computer-executable instructions performing the steps of:

receiving a first call from one of the at least one client to join a conference (see col. 35 lines 65-col. 36 lines 5);

looking for the conference (see col. 36 lines 1-15); and

joining the one of the at least one client into the conference, the step of joining comprising (see col. 36 lines 1-15):

creating a second call to call the conference (see col. 37 lines 1-65);

creating at least one multicast bridging terminal (see col. 37 lines 1-65);

selecting one of at least one audio stream and at least one video stream into the at least one multicast bridging terminal (see col. 36 lines 1-15);

connecting the second call (see col. 37 lines 1-65); and

answering the first call (see col. 37 lines 1-65).

As to claim 43, Ludwig teaches the computer readable medium of claim 42 wherein the at least one multicast bridging terminal comprises one of at least one audio bridge terminal and at least one video bridge terminal (see col. 37 lines 1-65).

As to claim 44, Ludwig teaches the computer readable medium of claim 43 wherein the at least one multicast bridging terminal comprises:

a sink module to receive at least one input stream from one of the first call and one of the second call (see col. 37 lines 1-65);

a source module to send at least one output stream to one of the first call and one of the second call (see col. 37 lines 1-65); and

an interface to send one of at least one input stream to the source module (see col. 37 lines 1-65).

As to claim 45, Ludwig teaches the computer readable medium of claim 44 wherein a data format of the at least one input stream and a data format of the at least one output stream is identical (see col. 31 lines 1-12).

As to claim 46, Ludwig teaches the computer readable medium of claim 45 wherein the at least one input stream is an audio stream and the at least one output stream is an audio stream, the data format being PCM linear at 16 bits per sample at 8 KHz (see col. 6 lines 53-61).

As to claim 48, Ludwig teaches the computer readable medium of claim 44 wherein the sink filter uses a memory allocator in an output pin of an upstream module, the upstream module sending at least one input stream to the sink filter (see col. 31 lines 45-col. 32 lines 2).

As to claim 49, Ludwig teaches the computer readable medium of claim 44 wherein the sink module is an audio sink module and the at least one input stream is at least input audio stream, the computer executable instructions further comprising the step of time-stamping, by the audio sink module, audio samples in the at least one audio input stream with a time of a clock of the audio sink module (see col. 39 lines 41-50, the user creates a timestamp by tagging the stream).

As to claim 50, Ludwig teaches the computer readable medium of claim 49 further comprising the step of updating the clock when a discontinuity flag is set (see col. 39 lines 41-50).

As to claim 51, Ludwig teaches the computer readable medium of claim 50 wherein the discontinuity flag is set when a first sample of a talk spurt is delivered to the audio sink filter (see col. 39 lines 41-50).

As to claim 52, Ludwig teaches the computer readable medium of claim 50 further comprising the step of:

if the data in the at least one input stream is continuous data, increasing the clock by a first time, the first time based on an amount of data passed through the audio sink module; and

if there is a silence period in the at least one input stream, adjusting the clock by a second time, the second time being the length of time of the silence period (see col. 29 lines 31-col. 30 lines 20).

As to claim 53, Ludwig teaches the computer readable medium of claim 45 wherein the data input stream is in frames of a first size and the data in the output stream is in frames of a second size, the computer readable instructions further comprising the steps of:

calling, by the sink module, the interface to send the data samples of the first size to the source filter;

if the first size is equal to the second size, sending the data in the input stream directly down stream; and

if the first size is not equal to the second size, constructing new data

frames of the second size, transforming the data samples of the first size into data

samples of the second size, copying the data samples of the second size into the new

data frames, and sending the new data frames down stream (see col. 32 lines 31-col.

33 lines 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 9, 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ludwig in view of Roy, U.S. Patent No. 6,600,725.

As to claim 9, Ludwig teaches the computer-readable medium of claim 3 wherein

the audio crossbar control parameter is selected from a group of audio crossbar control

parameters; the group comprising:

a setting to specify a periodicity of an interrupt service routine (see col. 37

lines 2-65 and col. 40 lines 49-56);

a setting to specify a maximum number of mixed input signals (see claim

7);

a setting to enable and disable silence compression (see col. 32 lines 41-

64 and col. 16 lines 32-38); and

a setting to enable and disable automatic gain control (see col. 16 lines 32-38 and col. 17 lines 36-44).

Ludwig doesn't explicitly teach the limitation "a setting to enable and disable silence detection ". However, Roy teaches a multimedia conferencing apparatus that have a setting to enable and disable silence detection (see col. 7 lines 21-37).

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Ludwig in view of a setting to enable and disable silence detection as in Roy. One would be motivated to include a setting to enable and disable silence detection in Ludwig because doing so would allow the user to determine whether a speaker continues to speak in case of a malfunction of the user's sound card or speaker.

As to claim 11, Ludwig teaches the computer-readable medium of claim 5 wherein the video crossbar control parameter is selected from a group of video crossbar control parameters, the group comprising a setting to specify a second time during which a speaker and a video switching process can not be taken over by a second speaker (see col. 37 lines 1-17, user can refuse incoming calls) and a setting to specify a third time, the third time being the time when a switch is made and when a fast update request is sent to the speaker's system (see col. 37 lines 44-54, user can add additional callers to conference thus adding audio and video input).

Ludwig doesn't explicitly teach the limitation "a setting to specify a first time to evaluate whether a speaker is continuing to speak ". However, Roy teaches

a multimedia conferencing apparatus that have a setting to specify a first time to

evaluate whether a speaker is continuing to speak (see col. 7 lines 21-37);

It would have been obvious for one of the ordinary skill in the art at the time of

the invention to modify Ludwig in view of a setting to specify a first time to evaluate

whether a speaker is continuing to speak as in Roy. One would be motivated to include

a setting to specify a first time to evaluate whether a speaker is continuing to speak in

Ludwig because doing so would allow the user to determine whether a speaker

continues to speak in case of a malfunction of the user's sound card or speaker.

As to claim 23, Ludwig teaches the apparatus according to claim 22 wherein the

audio topology property set comprises:

a property to do one of updating an audio crossbar content and retrieving

an audio crossbar content (see col. 21 lines 55-64);

a property to retrieve mixing and transcoding capabilities of an audio

crossbar (see col. 12 lines 59-col. 13 lines 9);

a property to do one pf setting a periodicity of an interrupt service routine

and getting a periodicity of an interrupt service routine (see col. 37 lines 2-65 and col.

40 lines 49-56);

a property to do one of setting a maximum number of mixed input signals

and getting a maximum number of mixed input signals (see claim 7);

a property to do one of enabling automatic gain control and disabling

automatic gain control (see col. 16 lines 32-38 and col. 17 lines 36-44); and

a property to retrieve a value of an audio level of a list of audio input

streams (see col. 23 lines 37-47).

Ludwig doesn't explicitly teach the limitation "a property to do one of enable and

disable silence detection ". However, Roy teaches a multimedia conferencing apparatus

that have a property to enable and disable silence detection (see col. 7 lines 21-37).

It would have been obvious for one of the ordinary skill in the art at the time of

the invention to modify Ludwig in view of a setting to enable and disable silence

detection as in Roy. One would be motivated to include a setting to enable and disable

silence detection in Ludwig because doing so would allow the user to determine

whether a speaker continues to speak in case of a malfunction of the user's sound card

or speaker.

7.   Claims 16, 17 and 33-35 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ludwig in view of Salesky et al., U.S. Patent No. 6,343,313 (referred

to hereafter as Salesky).

As to claim 16, Ludwig teaches a method to communicate between a media

service provider and a multipoint processing module controlling an encoder module and

a decoder module for processing video data in a multipoint conference the method

comprising the step exposing at least one interface by one of the media service provider

component and the multipoint processing module to communicate commands and

indications between the media service provider component and the multipoint

processing module (see the rejection of claim 13) and a command to set a relative

tradeoff between a high spatial resolution and a high frame rate (see col. 16 lines 53-
63).

Ludwig does not explicitly teach the limitations "a command to enter a fast-

update mode, a command to perform a fast update of a group of blocks, a command to

perform a fast update of macroblock, a command to use sync for every group of blocks

and an indication that a set of macroblocks has been received with errors and has been

treated as not coded.

However Salesky teaches a computer conferencing system including an interface

comprising:

> a command to enter a fast-update mode;

> a command to perform a fast update of a group of blocks;

> a command to perform a fast update of macroblock;

> a command to use sync for every group of blocks (see Fig. 4A-E and its

corresponding illustration and col. 12 lines 17-67);

> an indication that a set of macroblocks has been received with errors and

has been treated as not coded (see col. 20 lines 63-col. 21 lines 14).

It would have been obvious for one of the ordinary skill in the art at the time of

the invention to modify Ludwig in view of an encoder interface as in Salesky. One would

be motivated to modify Ludwig in view of using an encoder interface comprising a

command to perform a fast update of macroblock, a command to use sync for every

group of blocks and an indication that a set of macroblocks has been received with

errors and has been treated as not coded because doing so would allow the user to

obtain real time and continuous video transmission and display through the continuous

update of the blocks of the received signal.

As to claim 17, Saleski teaches a network interface comprising:

a command to inform the video pin of error channel conditions;

a command to supply the media service provider component the error

channel conditions;

a command to retrieve the values of the error channel conditions with

which the video pin may be setup, the values including a minimum value, a maximum

value, a default value, and a support value;

a command to inform the video pin a channel packet loss rate;

a command to supply the media service provider component the channel

packet loss rate; and

a command to retrieve values of the channel packet loss rate with which

the video pin may be setup, the values including a minimum value, a maximum value, a

default value, and a support value (see col. 20 lines 63-col. 21 lines 14).

As to claim 33, Saleski teaches the apparatus of claim 32 wherein the video

encoder property set comprises:

a property to command a video output stream to enter a fast update

picture mode;

a property to command the video output stream to perform a fast update

of a group of blocks;

a property to command the video output stream a fast update of a

macroblock;

a property to command the video output stream to use sync for every

group of blocks (see Fig. 4A-E and its corresponding illustration and col. 12 lines 17-

67); and

a property to provide an indication that a set of macroblocks has been

received with errors and has been treated as not coded (see col. 20 lines 63-col. 21

lines 14).

As to claims 34 and 35, Saleski teaches a network statistics property set

comprises:

a property to do one of informing a video output pin of error channel

conditions and supplying a media service provider component the error channel

conditions; and

a property to do one of informing the video output pin of a channel packet

rate loss and supplying the media service provider component the channel packet rate

loss (see col. 20 lines 63-col. 21 lines 14, where the error is the loss of packets).

8.   Claims 20, 40, 41, 47 and 54 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ludwig in view of Falco, U.S. Patent No. 6,606,112 (referred to

hereafter as Tucker).

As to claim 20, Ludwig teaches a method to communicate between a media

service provider and a multipoint processing module controlling an encoder module and

a decoder module for processing video data in a multipoint conference the method

comprising the step exposing at least one interface by one of the media service provider

component and the multipoint processing module to communicate commands and

indications between the media service provider component and the multipoint

processing module (see the rejection of claim 13).

Ludwig does not explicitly teach the limitation an RTP packet interface

comprising a command to adjust a maximum RTP packet size generated by the video

pin, a command to supply the media service provider component the maximum RTP

packet size and a command to retrieve values for the maximum RTP packet size with

which the video pin may be setup, the values including a minimum value, a maximum

value, a default value, and a support value.

However Falco teaches a video conferencing system having an RTP packet

interface comprising a command to adjust a maximum RTP packet size generated by

the video pin, a command to supply the media service provider component the

maximum RTP packet size and a command to retrieve values for the maximum RTP

packet size with which the video pin may be setup, the values including a minimum

value, a maximum value, a default value, and a support value (see col. 3 lines 13-65).

It would have been obvious for one of the ordinary skill in the art at the time of

the invention to modify Ludwig in view of an RTP packet interface as in Falco. One

would be motivated to modify Ludwig in view of an RTP packet interface because doing

so would allow the user receive audio picture in real time by dividing the picture into

data packets where the maximum size of packet s transmitted to provide fastest

communication possible between two or more communicating parties.

As to claim 40, Falco teaches at least one property set comprises a RTP control property set (see col. 3 lines 13-65).

As to claim 41, Falco teaches the RTP control property set comprises:

a property to do one of retrieving a maximum RTP packet size and setting the maximum RTP packet size (see col. 3 lines 13-65).

As to claim 47, Falco teaches the at least one input stream is a video stream and the at least one output stream is a video stream, the data format being RTP H. 263 (see col. 3 lines 13-65).

As to claim 54, Falco teaches the at least one input stream is at least one input video stream, the video data in the at least one input video stream is in video frames, the video frames containing at least one RTP packet, the computer executable instructions further comprising the steps of:

monitoring the RTP packets for a parameter change, and if the parameter changes:

discarding packets, by the video sink module, until an event occurs; and

resume sending video data down the stream (see col. 3 lines 13-65).

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein El-chanti whose telephone number is (703)305-4652. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone numbers for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Hussein El-chanti

Date: Sep 30, 2003

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